



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

999 18TH STREET - SUITE 500
DENVER, CO 80202-2466

EPR:ER

FINAL POLLUTION REPORT VASQUEZ BLVD. & I-70 (**Removal #3**) City and County of Denver, Colorado

I. HEADING

Date: **09/23/03**
Site Name: Vasquez Blvd. & I-70 (**Removal #3**)
(aka North Denver Residential)
From: Pete Stevenson, OSC
To: Kevin Mould, EPA Headquarters
POLREP No.: **POLREP #5 and Final**

II. BACKGROUND

Site No.: 9R
Response Authority: CERCLA
Action Memorandum: September 16, 1998
Amendment - RV#2: 04/18/00
Amendment - RV#3: 07/11/02
Start Date - RV#1: October 13, 1998
Completion Date - RV#1: October 1, 1999
Start Date - RV#2: September 27, 2000
Completion Date - RV#2: October 9, 2001
Start Date - RV#3: 10/01/02
Completion Date - RV#3: 09/23/03

III. SITE INFORMATION

A. Incident Category

Time-Critical, Fund-Lead, Removal Action

B. Site Description

1. Site Location

The Site is located in the northwest part of Denver and generally is bounded by the South Platte River on the West, Colorado Boulevard on the East, 35th Avenue on the South, and 52nd Avenue on the North.

2. Site Characteristics

The Site area was settled in 1851, four years after the first pioneers entered the valley. Approximately 5700 people currently live in Elyria and Swansea, the predominant



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neighborhoods in the Site area. Youth under 18 comprise 36% of the residents (twice the average of the City of Denver).

Soon after development of the area, it was presumably contaminated by wastes containing lead and arsenic from smelting operations in the area. At least three smelters operated in the area in the late 1800s. These smelters reportedly deposited wastes within or adjacent to the Site.

3. Description of Threat

Arsenic and, to a lesser degree, lead have been identified at the Site as the contaminants of concern. Arsenic and lead are hazardous substances, as defined by Section 101 (14) of CERCLA. These hazardous substances may have been released into the residential soils by historic smelting activities and spread through the Community by aerial deposition. At least 21 properties contain arsenic and lead at levels of concern to the Removal Program.

Because arsenic contamination is found in unsodded areas that are used for recreation, there is also a potential for contaminated soil to be wind-blown and dust-sized particles to be transported by wind and human activities into additional yards and into homes. There was an estimated 6000 cubic yards of soil contaminated above the selected Removal Program health protective action level of 2000 ppm lead and/or 400 ppm arsenic.

IV. RESPONSE INFORMATION

A. Situation

1. Action description

The following represents factors considered in determining whether properties within the community would be included within EPA's time critical removal action. These criteria were developed with input from EPA toxicologists, technical staff, and CDPHE/Denver personnel. They were based on the need to provide immediate reduction in exposure to arsenic/lead contaminated soil. These factors were generally considered on a zone-by-zone basis to establish whether an individual zone should be addressed to safeguard the overall residential yard for a young child. Both current and potential future exposures were considered in applying the criteria.

Initially, 21 properties were identified as candidates for this Removal Action and eighteen were selected for remediation. In August of 1999, EPA implemented a Phase III Field Investigation within the study area of the Site. Phase III, part of the ongoing Site remedial investigation, included sampling of surface soil, garden vegetables, and garden soils in residential yards and dust within the homes. It also included surface sampling of schools and parks. A total of 1550 residential properties, four schools and one park were sampled during the period August through November, 1999. The targeted properties were all those that had never been sampled in previous removal site assessments conducted in 1998 (the Phase I and Phase II sampling programs). The results of the Phase III investigation indicated that 33 residential properties were in need of removal action. **These additional properties were similar to those in the Original Action Memorandum and removal procedures were similar.**

A request for a Removal Action at 6 additional homes was forwarded to Emergency Response from the Remedial Program during FY2002. Confirmatory sampling was conducted at 5 homes (one denied access). No lead or arsenic was found at concentrations greater than the Removal Action levels.

2. Key Issues

There are no key issues identified at this time.

V. COST INFORMATION

Cost estimates for Removal Actions #1, #2, & #3 are shown below:

| | Original Ceiling (Removal #1& #2) | Final Ceiling (W/Removal#3) |
|--|--|--|
| <u>EXTRAMURAL COSTS:</u> | | |
| <u>Regional Allowance Costs</u> | | |
| ERRS | \$2,000,000 | \$2,240,000 |
| 20% Extramural Costs Contingency | \$ 400,000 | \$ 448,000 |
| <u>Other Extramural Costs Not Funded From Regional Allowance:</u> | | |
| <hr/> START | <u>\$ 156,000</u> | <u>\$ 186,000</u> |
| TOTAL EXTRAMURAL COSTS | \$2,556,000 | \$2,874,000 |
| <u>INTRAMURAL COSTS:</u> | | |
| Intramural Direct Costs | \$ 31,000 | \$ 46,000 |
| Intramural Indirect Costs | \$ 62,000 | \$ 92,000 |
| TOTAL INTRAMURAL COSTS | <u>\$ 93,000</u> | <u>\$ 138,000</u> |
| TOTAL REMOVAL PROJECT CEILING | \$2,649,000 | \$3,012,000 |